CLAIMS

What is claimed is:

1   1.   A method of audio communication between a first and a second telephony client,

2   the method comprising:

3   a)   establishing a call signaling connection between the first telephony client

4   located on a private network and the second telephony client on the Internet;

5   b)   utilizing the call signaling connection to provide to the first telephony client

6   an IP address and port number of the second telephony client for receipt of media

7   datagrams from the first telephony client;

8   c)   sending a plurality of media datagrams from the first telephony client to

9   the second telephony client utilizing the IP address and port number of the second

10   telephony client for receipt of media datagrams as the destination address and

11   destination port number for each media datagram;

12   d)   extracting a source IP address and source port number from at least one

13   of the media datagrams received by the second telephony client; and

14   e)   sending at least one media datagram from the second telephony client to

15   the first telephony client utilizing the extracted IP address and extracted port number as

16   the destination address and port number for the at least one media datagram.

17

1   2.   The method of claim 1, further comprising utilizing the IP address and port

2   number of the second telephony client for receipt of media datagrams as the source

3   address and source port number for the at least one media datagram sent from the

4   second telephony client to the first telephony client.

5

1   3.   The method of claim 2, wherein a plurality of media datagrams are sent from the

2   second telephony client to the first telephony client, each of the plurality of media

3   datagrams utilizing the extracted IP address and extracted port number which were

20

4   extracted from the media datagram that was most recently received by the second

5   telephony client as the destination address and destination port number.

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1   4.   The method of claim 2, wherein a plurality of media datagrams are sent from the

2   second telephony client to the first telephony client, and the method further includes

3   storing, in a memory, each extracted IP address and extracted port number, updating

4   the memory each time at least one of a new IP address and new port number is

5   extracted from a media datagram received by the second telephony client, and utilizing

6   the IP address and port number stored in the memory as the destination IP address

7   and port number for each of the media datagrams sent from the second telephony

8   client to the first telephony client.

9

1   5.   The method of claim 2, wherein a plurality of media datagrams are sent from the

2   second telephony client to the first telephony client, each of the plurality of media

3   datagrams utilizing the IP address extracted from at least one of the media datagrams

4   received by the second telephony client and utilizing the port number extracted from the

5   media datagram that was most recently received by the second telephony client as the

6   destination IP address and destination port number.

7

1   6.   The method of claim 2, wherein a plurality of media datagrams are sent from the

2   second telephony client to the first telephony client and the method further includes

3   storing, in a memory, the extracted IP address and extracted port number, updating the

4   memory each time new port number is extracted from a media datagram received by

5   the second telephony client, and utilizing the IP address and port number stored in the

6   memory as the destination IP address and destination port number for each of the

7   media datagrams sent from the second telephony client to the first telephony client.

8

1   7.   The method of claim 2, wherein a plurality of media datagrams are sent from the

2   second telephony client to the first telephony client, each of the plurality of media

3   datagrams utilizing the extracted IP address and extracted port number that are

4   extracted from one of the media datagrams received by the second telephony client

5   within a limited period of time prior to sending the media datagram as the destination IP

6   address and destination port number.

7

1   8.   The method of claim 2, wherein a plurality of media datagrams are sent from the

2   second telephony client to the first telephony client, and the method further includes

3   storing the extracted IP address and extracted port number in a memory, storing an

4   updated IP address and updated port number in memory when at least one of a

5   different IP address and different port number is extracted from a media datagram

6   received by the second telephony client, and utilizing an IP address and port number

7   stored in the memory within a limited period of time prior to sending each media

8   datagram as the destination IP address and destination port number for each of the

9   media datagrams sent from the second telephony client to the first telephony client.

10

1   9.   The method of claim 2, wherein a plurality of media datagrams are sent from the

2   second telephony client to the first telephony client, each of the plurality of media

3   datagrams utilizing the extracted IP address extracted from at least one of the media

4   datagrams received by the second telephony client and utilizing the port number

5   extracted from one of the media datagrams received by the second telephony client

6   within a limited period of time prior to sending each of the plurality of media datagrams

7   as the destination IP address and destination port number for each of the plurality of

8   media datagrams sent from the second telephony client to the first telephony client.

9

1   10.   The method of claim 2, wherein a plurality of media datagrams are sent from the

2   second telephony client to the first telephony client, and the method further includes

3   storing the extracted IP address and extracted port number in a memory, storing an

4   updated port number in memory when a different port number is extracted from a media

5   datagram received by the second telephony client, and utilizing the IP address and port

6   number stored within a limited period of time prior to sending each media datagram as

7   the destination IP address and destination port number for each of the plurality of

8   media datagrams sent from the second telephony client to the first telephony client.

9

1   11.   A method of audio communication between a first and a second telephony client,

2   the method comprising:

3   a)   communicating from the second telephony client to the first telephony

4   client an IP address and port number of the second telephony client for receipt of media

5   datagrams from the first telephony client;

6   b)   sending a media datagram from the first telephony client to the second

7   telephony client utilizing the IP address and port number for receipt of media datagrams

8   as the destination IP address and destination port number for the media datagram;

9   c)   extracting the source IP address and source port number the from the

10   media datagram; and

11   d)   sending a media datagram from the second telephony client to the first

12   telephony client utilizing the extracted IP address and extracted port number as the

13   destination address and port number.

14

1   12.   The method of claim 11, further comprising utilizing the IP address and port

2   number of the second telephony client for receipt of media datagrams from the first

3   telephony client as the source address and source port number for the media datagram

4   sent from the second telephony client to the first telephony client.

5

1   13.   The method of claim 12, wherein a plurality of media datagrams are sent from

2   the first telephony client to the second telephony client and a plurality of media

3   datagrams are sent from the second telephony client to the first telephony client, and

4   the method further includes extracting the source port number from each of the plurality

5   of media datagrams sent from the first telephony client to the second telephony client

6   and, utilizing the source port number extracted from the media datagram that was most

7   recently received by the second telephony client as the destination port number of each

8   of the plurality of media datagrams sent from the second telephony client to the first

9   telephony client.

10

1   14.   The method of claim 13, further including extracting the source IP address from

2   each of the plurality of media datagrams sent from the first telephony client to the

3   second telephony client and, utilizing the source IP address extracted from the media

4   datagram that was most recently received by the second telephony client as the

5   destination IP address of each of the plurality of media datagrams sent from the second

6   telephony client to the first telephony client.

7

1   15.   The method of claim 12, wherein a plurality of media datagrams are sent from

2   the first telephony client to the second telephony client and a plurality of media

3   datagrams are sent from the second telephony client to the first telephony client and the

4   method further includes storing, in a memory, the source IP address and source port

5   number from one of the media datagrams sent from the first telephony client to the

6   second telephony client, extracting the source port number from media datagrams

7   subsequently received by the second telephony client, storing an updated source port

8   number in memory when an extracted source port number is different than the source

9   port number stored in the memory, and utilizing the source IP address and source port

10   number stored in memory as the destination IP address and destination port number for

11   each of the plurality of media datagrams sent from the second telephony client to the

12   first telephony client.

13

1   16.   The method of claim 15, further including extracting the source IP address from

2   the media diagrams subsequently received by the second telephony client and storing

3   an updated source IP address in memory when an extracted IP address is different

4   than the IP address stored in memory.

5

1   17.   The method of claim 12, wherein a plurality of media datagrams are sent from

2   the first telephony client to the second telephony client and a plurality of media

3　datagrams are sent from the second telephony client to the first telephony client and the

4　method further includes, extracting the source port number from each of the plurality of

5　media datagrams sent from the first telephony client to the second telephony client and,

6　utilizing the source port number extracted from a media datagram received by the

7　second telephony client within a limited period of time prior to sending each media

8　datagram as the destination port number of each of the media datagrams sent from the

9　second telephony client to the first telephony client.

10

1　18.　　The method of claim 17, further including extracting the source IP address from

2　each of the plurality of media datagrams sent from the first telephony client to the

3　second telephony client and, utilizing the source IP address extracted from a media

4　datagram received by the second telephony client within a limited period of time prior to

5　sending each media datagram as the destination IP address of each of the media

6　datagrams sent from the second telephony client to the first telephony client.

7

1　19.　　A method of communicating audio data with a remote telephony client, the

2　method comprising:

3　　　　a)　　establishing a port number for receipt of media datagrams from the

4　remote telephony client and communicating such port number to the remote telephony

5　client;

6　　　　b)　　receiving a media datagram from the remote telephony client on the

7　established port number;

8　　　　c)　　extracting the source IP address and source port number from the

9　received media datagram; and

10　　　　d)　　sending a media datagram to the remote telephony client utilizing the

11　extracted source IP address and source port number as the destination IP address and

12　destination port number of the media datagram sent to the remote telephony client.

13

1   20.   The method of claim 19, further including utilizing the port number established

2   for receipt of media datagrams from the remote telephony client as the source port

3   number for sending media datagrams to the remote telephony client.

4

1   21.   The method of claim 20, wherein a plurality of media datagrams are sent to the

2   remote telephony client and a plurality of media datagrams are received from the

3   remote telephony client and the method further includes, extracting the source port

4   number from each of the plurality of media datagrams received from the remote

5   telephony client and utilizing the source port number extracted from the media

6   datagram most recently received as the destination port number for each of the plurality

7   of media datagrams sent to the remote telephony client.

8

1   22.   The method of claim 21, further including extracting the source IP address from

2   each of the plurality of media datagrams received from the remote telephony client and

3   utilizing the source IP address extracted from the media datagram most recently

4   received as the destination IP address for each of the plurality of media datagrams sent

5   to the remote telephony client.

6

1   23.   The method of claim 20, wherein a plurality of media datagrams are sent to the

2   remote telephony client and a plurality of media datagrams are received from the

3   remote telephony client and the method further includes storing, in a memory, the

4   source IP address and source port number extracted from one of the media datagrams

5   received from the remote telephony client, extracting the source port number from

6   media datagrams that are subsequently received from the remote telephony client,

7   storing an updated source port number in memory when an extracted source port

8   number is different than the source port number stored in the memory, and utilizing the

9   source IP address and source port number stored in memory as the destination IP

10 address and destination port number for each of the plurality of media datagrams sent

11 to the remote telephony client.

12

1   24.   The method of claim 23, further including extracting the source IP address from

2   media datagrams that are subsequently received from the remote telephony client and

3   storing an updated source IP address in memory when an extracted IP address is

4   different than the IP address stored in memory.

5

1   25.   The method of claim 20, wherein a plurality of media datagrams are sent to the

2   remote telephony client and a plurality of media datagrams are received from the

3   remote telephony client and the method further includes, extracting the source port

4   number from each of the plurality of media datagrams received from the remote

5   telephony client and utilizing the source port number extracted from a media datagram

6   received within a limited period of time prior to sending each media datagram as the

7   destination port number of each of the media datagrams sent to the remote telephony

8   client.

9

1   26.   The method of claim 25, further including extracting the source IP address from

2   each of the plurality of media datagrams received from the remote telephony client and

3   utilizing the source IP address extracted a media datagram received within a limited

4   period of time prior to sending each media datagram as the destination IP address of

5   each of the media datagrams sent to the remote telephony client.

6

1   27.   A method of communicating audio data with a remote telephony client, the

2   method comprising:

3   a)   establishing a port number for receipt of media datagrams from the

4   remote telephony client and communicating such port number to the remote telephony

5   client;

6   b)   receiving from the remote telephony client identification of an IP address

7   and port number to utilize for sending media datagrams to the remote telephony client

8   and storing the identified IP address and identified port number in a memory;

9   c)   sending a plurality of media datagrams to the remote telephony client

10   utilizing the IP address and port number most recently stored in the memory as the

11   destination IP address and destination port number for each of the plurality of media

12   datagrams;

13   d)   receiving a plurality of media datagrams from the remote telephony client

14   on the established port number and extracting the source IP address and source port

15   number from each of the received media datagrams; and

16   e)   storing an updated IP address and updated port number in the memory

17   each time at least one of an extracted IP address and extracted port number does not

18   match the IP address and port number stored in the memory.

19

1   28.   The method of claim 27, further including utilizing the port number established

2   for receipt of media datagrams from the remote telephony client as the source port

3   number of each of the media datagrams sent to the remote telephony client.

4

1   29.   A telephony client comprising:

2   a)   a network interface circuit for sending media datagrams to a remote

3   telephony client and for receiving media datagrams from the remote telephony client;

4   b)   an audio interface system for converting a media datagram received from

5   the remote telephony client to analog audio data for driving a speaker and for

6   converting analog audio data from a microphone to a media datagram for sending to

7   the remote telephony client;

8   c)   a datagram generation module providing a destination IP address and

9   port number for sending the media datagram to the remote telephony client, the

10   datagram generation module operating to extract the source IP address and source

11   port number from the media datagram received from the remote telephony client and

12   provide the extracted IP address and port number as the destination IP address and

13   port number for sending the media datagram to the remote telephony client.

14

1   30.   The telephony client of claim 29, wherein the datagram generation module

2   further provides a source port number for sending the media datagram to the remote

3   telephony client, the source port number being the same port number on which media

4   datagram is received from the remote telephony client.

5

1   31.   The telephony client of claim 30, wherein the audio interface circuit converts

2   analog audio data from the microphone to a sequence of media datagrams for sending

3   to the remote telephony client and converts a sequence of media datagrams received

4   from the remote telephony client to analog audio data for driving the speaker, and the

5   datagram generation module operates to extract the source port number from each of

6   the sequence of media datagrams received from the remote telephony client and

7   provides the source port number extracted from the media datagram that was most

8   recently received as the destination port number for each of the sequence of media

9   datagrams sent to the remote telephony client.

10

1   32.   The telephony client of claim 31, wherein the datagram generation module

2   further operates to extract the source IP address from each of the sequence of media

3   datagrams received from the remote telephony client and provides the source IP

4   address extracted from the media datagram that was most recently received as the

5   destination IP address for each of the sequence of media datagrams sent to the remote

6   telephony client.

7

1   33.   The telephony client of claim 30, wherein the audio interface circuit converts

2   analog audio data from the microphone to a sequence of media datagrams for sending

3   to the remote telephony client and converts a sequence of media datagrams received

4   from the remote telephony client to analog audio data for driving the speaker, and the

5   datagram generation module operates to store, in a memory, the source IP address

6   and source port number from one of the media datagrams received from the remote

7   telephony client, extract the source port number from media datagrams that are

8   subsequently received, store an updated source port number in memory when an

9   extracted source port number from a subsequently received media datagram is different

10   than the source port number stored in the memory, and provide the source IP address

11   and source port number stored in memory as the destination IP address and

12   destination port number for each of the sequence of media datagrams sent to the

13   remote telephony client.

14

1   34.   The telephony client of claim 33, wherein the datagram generation module

2   further operates to extract the source IP address media diagrams that are subsequently

3   received and store an updated source IP address in memory when an IP address

4   extracted from a subsequently received media datagram is different than the IP address

5   stored in memory.

6

1   35.   The telephony client of claim 30, wherein the audio interface circuit converts

2   analog audio data from the microphone to a sequence of media datagrams for sending

3   to the remote telephony client and converts a sequence of media datagrams received

4   from the remote telephony client to analog audio data for driving the speaker, and the

5   datagram generation module operates to extract the source port number from each of

6   the sequence of media datagrams received from the remote telephony client and

7   provide the source port number extracted from one of the media datagrams that was

8   received within a limited period of time prior to sending each media datagram as the

9   destination port number for each media datagram sent to the remote telephony client.

10

1   36.   The telephony client of claim 35, wherein the datagram generation module

2   further extracts the source IP address from each of the sequence of media datagrams

3   received from the remote telephony client and provides the source IP address extracted

4   from one of the media datagram that was received within a limited period of time prior

5   to sending each media datagram as the destination IP address number for each media

6   datagram sent to the remote telephony client.

7

1   37.   A telephony client comprising:

2   a)   a network interface circuit for sending media datagrams to a remote

3   telephony client and for receiving media datagrams from the remote telephony client on

4   the same port number;

5   b)   an audio interface system for converting a sequence of media datagrams

6   received from the remote telephony client to analog audio data for driving a speaker

7   and for converting analog audio data from a microphone to a sequence of media

8   datagrams for sending to the remote telephony client;

9   c)   a datagram generation module providing a destination IP address and

10   port number for sending each media datagram to the remote telephony client, the

11   datagram generation module operating to:

12   (i)   establish a port number for receipt of media datagrams from the

13   remote telephony client and communicate such port number to the remote

14   telephony client;

15   (ii)   receive from the remote telephony client identification of an IP

16   address and port number to utilize for sending media datagrams to the remote

17   telephony client and store the identified IP address and identified port number in

18   a memory;

19   (iii)   provide the IP address and port number most recently stored in the

20   memory as the destination IP address and destination port number for each of

21   the media datagrams sent to the remote telephony client;

22   (iv)   extract the source IP address and source port number from each of

23   the media datagrams received from the remote telephony client; and

24   (v)   store an updated IP address and updated port number in the

25   memory each time at least one of an extracted IP address and extracted port

26   number does not match the IP address and port number stored in the memory.

27

1   38.   A telephony client comprising:

2   a)   a network interface circuit for sending media datagrams to a remote

3   telephony client and for receiving media datagrams from the remote telephony client on

4   the same port number;

5   b)   an audio interface system for converting a sequence of media datagrams

6   received from the remote telephony client to analog audio data for driving a speaker

7   and for converting analog audio data from a microphone to a sequence of media

8   datagrams for sending to the remote telephony client;

9   c)   a datagram generation module providing a destination IP address and

10   port number for sending each media datagram to the remote telephony client, the

11   datagram generation module operating to:

12   (i)   establish a port number for receipt of media datagrams from the

13   remote telephony client and communicate such port number to the remote

14   telephony client;

15   (ii)   receive from the remote telephony client identification of an IP

16   address and port number to utilize for sending media datagrams to the remote

17   telephony client and store the identified IP address and identified port number in

18   a memory;

19   (iii)   provide the IP address and port number most recently stored in the

20   memory as the destination IP address and destination port number for each of

21   the media datagrams sent to the remote telephony client;

22   (iv)   extract the source IP address from at least one media datagram

23   received from the remote telephony client and extract the source port number

24   from each of the media datagrams received from the remote telephony client;

25   and

26   (v)   update at least one of the IP address and port number stored in the

27   memory if at least one of the extracted IP address and extracted port number

28   does not match the IP address and port number stored in the memory.

29

1   39.   A method of audio communication between a first and a second telephony client,

2   the method comprising:

3   a)   communicating from the second telephony client to the first telephony

4   client an IP address and port number of the second telephony client for receipt of media

5   datagrams from the first telephony client;

6   b)   communicating from the first telephony client to the second telephony
7   client an IP address and port number of the first telephony client for receipt of media
8   datagrams from the second telephony client;

9   c)   sending a media datagram from the first telephony client to the second
10   telephony client utilizing the IP address and port number for receipt of media datagrams
11   by the second telephony client as the destination IP address and destination port
12   number for the media datagram;

13   d)   extracting the source IP address and source port number the from the
14   media datagram;

15   e)   sending a media datagram from the second telephony client to the first
16   telephony client utilizing the IP address and port number communicated from the first
17   telephony client to the second telephony client for receipt of media datagrams as the
18   destination IP address and port number if the extracted source IP address and the IP
19   address communicated from the first telephony client to the second telephony client are
20   the same; and

21   f)   sending a media datagram from the second telephony client to the first
22   telephony client utilizing the extracted IP address and extracted port number as the
23   destination address and port number if the extracted source IP address and the IP
24   address communicated from the first telephony client to the second telephony client are
25   not the same.
26

1   40.   The method of claim 39, further comprising utilizing the IP address and port
2   number of the second telephony client for receipt of media datagrams from the first
3   telephony client as the source address and source port number for the media datagram
4   sent from the second telephony client to the first telephony client.
5

1   41.   The method of claim 40, wherein a plurality of media datagrams are sent from
2   the first telephony client to the second telephony client and a plurality of media
3   datagrams are sent from the second telephony client to the first telephony client and, if
4   the extracted source IP address and the IP address communicated from the first

5   telephony client to the second telephony client are not the same, then the method
6   further includes extracting the source port number from each of the plurality of media
7   datagrams sent from the first telephony client to the second telephony client and,
8   utilizing the source port number extracted from the media datagram that was most
9   recently received by the second telephony client as the destination port number of each
10   of the plurality of media datagrams sent from the second telephony client to the first
11   telephony client.
12

1   42.   The method of claim 41, further including extracting the source IP address from
2   each of the plurality of media datagrams sent from the first telephony client to the
3   second telephony client and, utilizing the source IP address extracted from the media
4   datagram that was most recently received by the second telephony client as the
5   destination IP address of each of the plurality of media datagrams sent from the second
6   telephony client to the first telephony client.
7

1   43.   The method of claim 40, wherein a plurality of media datagrams are sent from
2   the first telephony client to the second telephony client and a plurality of media
3   datagrams are sent from the second telephony client to the first telephony client and, if
4   the extracted source IP address and the IP address communicated from the first
5   telephony client to the second telephony client are not the same, the method further
6   includes storing, in a memory, the source IP address and source port number from one
7   of the media datagrams sent from the first telephony client to the second telephony
8   client, extracting the source port number from media datagrams subsequently received
9   by the second telephony client, storing an updated source port number in memory when
10   an extracted source port number is different than the source port number stored in the
11   memory, and utilizing the source IP address and source port number stored in memory
12   as the destination IP address and destination port number for each of the plurality of
13   media datagrams sent from the second telephony client to the first telephony client.
14

1 44.   The method of claim 43, further including extracting the source IP address from
2 the media diagrams subsequently received by the second telephony client and storing
3 an updated source IP address in memory when an extracted IP address is different
4 than the IP address stored in memory.
5

1 45.   The method of claim 40, wherein a plurality of media datagrams are sent from
2 the first telephony client to the second telephony client and a plurality of media
3 datagrams are sent from the second telephony client to the first telephony client and, if
4 the extracted source IP address and the IP address communicated from the first
5 telephony client to the second telephony client are not the same, the method further
6 includes, extracting the source port number from each of the plurality of media
7 datagrams sent from the first telephony client to the second telephony client and,
8 utilizing the source port number extracted from a media datagram received by the
9 second telephony client within a limited period of time prior to sending each media
10 datagram as the destination port number of each of the media datagrams sent from the
11 second telephony client to the first telephony client.
12

1 46.   The method of claim 45, further including extracting the source IP address from
2 each of the plurality of media datagrams sent from the first telephony client to the
3 second telephony client and, utilizing the source IP address extracted from a media
4 datagram received by the second telephony client within a limited period of time prior to
5 sending each media datagram as the destination IP address of each of the media
6 datagrams sent from the second telephony client to the first telephony client.
7

1 47.   A method of communicating audio data with a remote telephony client, the
2 method comprising:
3   a)   establishing a port number for receipt of media datagrams from the
4 remote telephony client and communicating such port number to the remote telephony
5 client;

6   b)   receiving from the remote telephony client identification of an IP address

7   and port number established by the remote telephony client for receipt of media

8   datagrams;

9   c)   receiving a media datagram from the remote telephony client on the

10 established port number;

11   d)   extracting the source IP address and source port number from the

12 received media datagram;

13   e)   sending a media datagram to the remote telephony client utilizing the IP

14 address and port number identified by the remote telephony client as the destination IP

15 address and destination port number of the media datagram sent to the remote

16 telephony client if the extracted source IP address matches the identified IP address;

17 and

18   f)   sending a media datagram to the remote telephony client utilizing the

19 extracted source IP address and source port number as the destination IP address and

20 destination port number of the media datagram sent to the remote telephony client if

21 the extracted source IP address does not match the identified IP address.

22

1   48.   The method of claim 47, further including utilizing the port number established

2 for receipt of media datagrams from the remote telephony client as the source port

3 number for sending media datagrams to the remote telephony client.

4

1   49.   The method of claim 48, wherein a plurality of media datagrams are sent to the

2 remote telephony client and a plurality of media datagrams are received from the

3 remote telephony client and, if the extracted source IP address does not match the

4 identified IP address, the method further includes, extracting the source port number

5 from each of the plurality of media datagrams received from the remote telephony client

6 and utilizing the source port number extracted from the media datagram most recently

7 received as the destination port number for each of the plurality of media datagrams

8 sent to the remote telephony client.

9

1 50. The method of claim 49, further including extracting the source IP address from
2 each of the plurality of media datagrams received from the remote telephony client and
3 utilizing the source IP address extracted from the media datagram most recently
4 received as the destination IP address for each of the plurality of media datagrams sent
5 to the remote telephony client.
6

1 51. The method of claim 48, wherein a plurality of media datagrams are sent to the
2 remote telephony client and a plurality of media datagrams are received from the
3 remote telephony client and, if the extracted source IP address does not match the
4 identified IP address, the method further includes storing, in a memory, the source IP
5 address and source port number extracted from one of the media datagrams received
6 from the remote telephony client, extracting the source port number from media
7 datagrams that are subsequently received from the remote telephony client, storing an
8 updated source port number in memory when an extracted source port number is
9 different than the source port number stored in the memory, and utilizing the source IP
10 address and source port number stored in memory as the destination IP address and
11 destination port number for each of the plurality of media datagrams sent to the remote
12 telephony client.
13

1 52. The method of claim 51, further including extracting the source IP address from
2 media datagrams that are subsequently received from the remote telephony client and
3 storing an updated source IP address in memory when an extracted IP address is
4 different than the IP address stored in memory.
5

1 53. The method of claim 48, wherein a plurality of media datagrams are sent to the
2 remote telephony client and a plurality of media datagrams are received from the
3 remote telephony client and, if the extracted source IP address does not match the
4 identified IP address, the method further includes extracting the source port number
5 from each of the plurality of media datagrams received from the remote telephony client
6 and utilizing the source port number extracted from a media datagram received within a

37

7 limited period of time prior to sending each media datagram as the destination port

8 number of each of the media datagrams sent to the remote telephony client.

9

1 54.   The method of claim 53, further including extracting the source IP address from

2 each of the plurality of media datagrams received from the remote telephony client and

3 utilizing the source IP address extracted a media datagram received within a limited

4 period of time prior to sending each media datagram as the destination IP address of

5 each of the media datagrams sent to the remote telephony client.

6

1 55.   A telephony client comprising:

2   a)   a network interface circuit for sending media datagrams to a remote

3 telephony client and for receiving media datagrams from the remote telephony client;

4   b)   an audio interface system for converting a media datagram received from

5 the remote telephony client to analog audio data for driving a speaker and for

6 converting analog audio data from a microphone to a media datagram for sending to

7 the remote telephony client;

8   c)   a datagram generation module providing a destination IP address and

9 port number for sending the media datagram to the remote telephony client, the

10 datagram generation module operating to:

11   i)   extract the source IP address and source port number from the

12   media datagram received from the remote telephony client,

13   ii)   provide the extracted IP address and port number as the

14   destination IP address and port number for sending the media datagram to the

15   remote telephony client if the extracted IP address does not match an IP address

16   established by the remote telephony client for receipt of media datagrams; and

17   iii)   provide the IP address and a port number established by the

18   remote telephony client for receipt of media datagrams if the extracted IP

19   address matches the IP address established by the remote telephony client for

20   receipt of media datagrams.

21

38

1 56. The telephony client of claim 55, wherein the datagram generation module
2 further provides a source port number for sending the media datagram to the remote
3 telephony client, the source port number being the same port number on which the
4 media datagram is received from the remote telephony client.
5

1 57. The telephony client of claim 56, wherein the audio interface circuit converts
2 analog audio data from the microphone to a sequence of media datagrams for sending
3 to the remote telephony client and converts a sequence of media datagrams received
4 from the remote telephony client to analog audio data for driving the speaker and, if the
5 extracted IP address does not match an IP address established by the remote
6 telephony client for receipt of media datagrams, the datagram generation module
7 operates to extract the source port number from each of the sequence of media
8 datagrams received from the remote telephony client and provides the source port
9 number extracted from the media datagram that was most recently received as the
10 destination port number for each of the sequence of media datagrams sent to the
11 remote telephony client.
12

1 58. The telephony client of claim 57, wherein the datagram generation module
2 further operates to extract the source IP address from each of the sequence of media
3 datagrams received from the remote telephony client and provides the source IP
4 address extracted from the media datagram that was most recently received as the
5 destination IP address for each of the sequence of media datagrams sent to the remote
6 telephony client.
7

1 59. The telephony client of claim 56, wherein the audio interface circuit converts
2 analog audio data from the microphone to a sequence of media datagrams for sending
3 to the remote telephony client and converts a sequence of media datagrams received
4 from the remote telephony client to analog audio data for driving the speaker and, if the
5 extracted IP address does not match an IP address established by the remote
6 telephony client for receipt of media datagrams, the datagram generation module

7   operates to store, in a memory, the source IP address and source port number from

8   one of the media datagrams received from the remote telephony client, extract the

9   source port number from media datagrams that are subsequently received, store an

10   updated source port number in memory when an extracted source port number from a

11   subsequently received media datagram is different than the source port number stored

12   in the memory, and provide the source IP address and source port number stored in

13   memory as the destination IP address and destination port number for each of the

14   sequence of media datagrams sent to the remote telephony client.

15

1   60.   The telephony client of claim 59, wherein the datagram generation module

2   further operates to extract the source IP address media diagrams that are subsequently

3   received and store an updated source IP address in memory when an IP address

4   extracted from a subsequently received media datagram is different than the IP address

5   stored in memory.

6

1   61.   The telephony client of claim 56, wherein the audio interface circuit converts

2   analog audio data from the microphone to a sequence of media datagrams for sending

3   to the remote telephony client and converts a sequence of media datagrams received

4   from the remote telephony client to analog audio data for driving the speaker and, if the

5   extracted IP address does not match an IP address established by the remote

6   telephony client for receipt of media datagrams, the datagram generation module

7   operates to extract the source port number from each of the sequence of media

8   datagrams received from the remote telephony client and provide the source port

9   number extracted from one of the media datagrams that was received within a limited

10   period of time prior to sending each media datagram as the destination port number for

11   each media datagram sent to the remote telephony client.

12

1   62.   The telephony client of claim 61, wherein the datagram generation module

2   further extracts the source IP address from each of the sequence of media datagrams

3   received from the remote telephony client and provides the source IP address extracted

4   from one of the media datagram that was received within a limited period of time prior

5   to sending each media datagram as the destination IP address number for each media

6   datagram sent to the remote telephony client.

7